

SIMATIC DP, ELECTRONIC MODULE ANALOG,
FOR ET 200B, W=160MM, 4AI 0(4)...20mA;
+/- 10V, FAST CONVERSION, 12 BITS

Supply voltage	
permissible range, lower limit (DC)	18.5 V
permissible range, upper limit (DC)	30.2 V
Load voltage 1L+	
Rated value (DC)	24 V ; Value at t < 0.5 s: 35 V
Input current	
Digital outputs	
from load voltage L+, max.	70 mA ; Logic
Power loss	
Power loss, typ.	1.8 W
Hardware configuration	
Rack	
required terminal block	TB8
Analog inputs	
Number of analog inputs	4
permissible input voltage for voltage input (destruction limit), max.	30 V ; +/-30 V (static) or +/-75 V (pulse for max. 1 ms and mark to space ratio 1:20)
permissible input current for current input (destruction limit), max.	24 mA
Cycle time (all channels) max.	5 ms
Input ranges	
Voltage	Yes
Current	Yes
Input ranges (rated values), voltages	
-1.25 to +1.25 V	Yes
Input resistance (-1.25 to +1.25 V)	100 kΩ
-10 V to +10 V	Yes
Input resistance (-10 V to +10 V)	100 kΩ
-2.5 V to +2.5 V	Yes
Input resistance (-2.5 V to +2.5 V)	100 kΩ
-5 V to +5 V	Yes
Input resistance (-5 V to +5 V)	100 kΩ

Input ranges (rated values), currents	
0 to 20 mA	Yes
Input resistance (0 to 20 mA)	125 Ω
-20 to +20 mA	Yes
Input resistance (-20 to +20 mA)	125 Ω
4 to 20 mA	Yes
Input resistance (4 to 20 mA)	125 Ω
Cable length	
Cable length, shielded, max.	100 m
Analog value generation	
Measurement principle	successive approximation
Integration and conversion time/resolution per channel	
Resolution with overrange (bit including sign), max.	12 bit ; Two's complement
Integration time, ms	0.1 ms / channel
Encoder	
Connection of signal encoders	
for voltage measurement	Yes
for voltage measurement as 2-wire transducer	Yes
for current measurement as 2-wire transducer	Yes
for current measurement as 4-wire transducer	Yes
Errors/accuracies	
Operational error limit in overall temperature range	
Voltage, relative to input area, (+/-)	32 % ; 0 to 60°C
Current, relative to input area, (+/-)	41 % ; 0 to 60°C
Basic error limit (operational limit at 25 °C)	
Voltage, relative to input area, (+/-)	0.15 %
Current, relative to input area, (+/-)	0.2 %
Interference voltage suppression for $f = n \times (f_1 \pm 1 \%)$, f_1 = interference frequency	
Common mode interference, min.	70 dB ; $U_{pp} < 1 \text{ V}$
Interfaces	
PROFIBUS DP	
Transmission rate, max.	12 Mbit/s
Communication functions	
Bus protocol/transmission protocol	PROFIBUS DP
Interrupts/diagnostics/status information	
Alarms	
Diagnostic alarm	Yes ; Parameterizable
Limit value alarm	Yes ; Parameterizable, channels 0 and 2

Diagnostic messages	
Overrange	Yes ; Rated range
Wire-break in signal transmitter cable	Yes ; Measuring range 4 to 20 mA only
Diagnostics indication LED	
Bus fault BF (red)	Yes
Run mode RUN (green)	Yes
Galvanic isolation	
between electronic block and PROFIBUS DP	Yes
Galvanic isolation analog inputs	
Galvanic isolation analog inputs	No
Permissible potential difference	
between the inputs (UCM)	max. +/- 10 V
between inputs and MANA (UCM)	max. +/- 1 V
Degree and class of protection	
IP20	Yes
Ambient conditions	
Operating temperature	
horizontal installation, min.	0 °C
horizontal installation, max.	60 °C ; 41 °C for other mountings
Air pressure	
permissible range, min.	795 hPa
permissible range, max.	1080 hPa
Relative humidity	
Operation, min.	15 %
Operation, max.	95 % ; RH class 2 in accordance with IEC 1131-2
Vibrations	
Operation, tested according to IEC 60068-2-6	Yes ; IEC 68, Part 2-6; 10 to 57 Hz; (constant amplitude 0.075 mm); 57 to 150 Hz; (constant acceleration 1 g)
Shock test	
tested according to IEC 60068-2-27	Yes ; IEC 68, Part 2-27; half-sine, 15 g, 11 ms
Connection method	
Inputs/outputs	Screw-type and spring-loaded terminals, permanent wiring; 3 and 4-wire connection
Dimensions	
Width	160 mm ; EB and TB
Height	130 mm ; EB and TB
Depth	60 mm ; EB and TB
Weights	
Weight, approx.	550 g ; EB and TB

